FlyBy Math™ Alignment
Texas Essential Knowledge and Skills (TEKS) for Mathematics
§111.17 Mathematics, Grade 5

b. Knowledge and Skills

(6) Patterns, relationships, and algebraic thinking. The student describes relationships mathematically.

Knowledge and Skills and Performance Descriptions	***FlyBy Math™* Activities**
The student is expected to select from and use diagrams and number sentences to represent real-life situations.	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

(9) Geometry and spatial reasoning. The student recognizes the connection between ordered pairs of numbers and locations of points on a plane.

Knowledge and Skills and Performance Descriptions	***FlyBy Math™* Activities**
The student is expected to locate and name points on a coordinate plane using ordered pairs of whole numbers.	--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.

(11) Measurement. The student applies measurement concepts. The student is expected to:

Knowledge and Skills and Performance Descriptions	***FlyBy Math™* Activities**
(A) measure to solve problems involving length (including perimeter), weight, capacity, time, temperature, and area;	--Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation. --Conduct simulation and measurement for several aircraft conflict problems.

(13) Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data. The student is expected to:

Knowledge and Skills and Performance Descriptions	***FlyBy Math™* Activities**
(A) use tables of related number pairs to make line graphs;	--Use tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
(C) graph a given set of data using an appropriate graphical representation such as a picture or line.	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.

(14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:	
Knowledge and Skills and Performance Descriptions (A) identify the mathematics in everyday situations.	***FlyBy Math™* Activities** --Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
(B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;	-- Conduct simulation and measurement for several aircraft conflict problems. -- Compare predictions, calculations, and experimental evidence for several aircraft conflict problems.
(C) select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem;	--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes. --Conduct a simulation of each airplane scenario.
(D) use tools such as real objects, manipulatives, and technology to solve problems.	-- Conduct simulation and measurement for several aircraft conflict problems.

(15) Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language. The student is expected to:	
Knowledge and Skills and Performance Descriptions (A) explain and record observations using objects, words, pictures, numbers, and technology; and	***FlyBy Math™* Activities** --Predict outcomes and explain results of mathematical models and experiments. --Explain and justify solutions regarding the motion of two airplanes using the results of plotting points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system.
(B) relate informal language to mathematical language and symbols.	--Use formulas and graphs to solve and analyze aircraft conflict problems and to communicate results.

(16) Underlying processes and mathematical tools. The student uses logical reasoning to make sense of his or her world. The student is expected to:	
Knowledge and Skills and Performance Descriptions (A) make generalizations from patterns or sets of examples and nonexamples; and	***FlyBy Math™* Activities** --Predict the relative motion of two airplanes on given paths. --Apply mathematics to predict and analyze aircraft conflicts and validate through experimentation.

	-- Compare predictions, calculations, and experimental evidence for several aircraft conflict problems.
(B) justify why an answer is reasonable and explain the solution process.	-- Compare predictions, calculations, and experimental evidence for several aircraft conflict problems. --Use formulas and graphs to solve and analyze aircraft conflict problems and to communicate results.